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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,869	01/15/2004	Takaaki Ota	SON5180.32A1	8419

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O'BANION & RITCHEY LLP/ SONY ELECTRONICS, INC.
400 CAPITOL MALL
SUITE 1550
SACRAMENTO, CA 95814

EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,869	OTA, TAKAAKI	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 19-20 are rejected under 35 U.S.C. 102(b as being anticipated by Butter et al., (hereinafter referred to as "Butter").

Butter discloses a method for controlling audio/visual signal distribution (Butter: figure 6), comprising: allocating a buffer to a transmitter and a receiver (Butter: column 1, lines 35-45), running a channel connected to the buffer in a best effort mode (Butter: column 14, lines 5-20); comparing an available bandwidth within the channel to a data generation rate through the channel (Butter: column 9, lines 35-45) and based on the comparison, controlling an accumulation of data within the buffer (Butter: column 14, lines 21-30), as in claim 19.

Butter discloses a method for controlling audio/visual signal distribution (Butter: figure 6), comprising: receiving an input signal (Butter: column 3, lines 1-5); prefiltering the input signal (Butter: column 7, lines 1-18); generating plural quantized coefficients from the input

signal, the plural quantized coefficients having a variable coarseness (Butter: column 14, lines 25-35) encoding the plural quantized coefficients (Butter: column 14, lines 35-45); transmitting plural encoded quantized coefficients to a transmission buffer (Butter: column 15, lines 15-20); monitoring an occupancy level within the transmission buffer (Butter: column 14, lines 5-15); increasing the coarseness of the plural quantized coefficients as the occupancy level within the transmission buffer increases and decreasing the coarseness of the plural quantized coefficients as the occupancy level within the transmission buffer decreases (Butter: column 7, lines 35-45), as in claim 20.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butter et al., (hereinafter referred to as "Butter").

Butter discloses an audio/visual signal distribution system having a digital data generator connected to a transmitter (Butter: figure 6), said transmitter configured to transmit said digital data over a communications link to a receiver (Butter: column 1, lines 35-45), the improvement comprising: a data transmission buffer connected between the digital data generator and the transmitter (Butter: column 15, lines 15-20), as in claim 1. However, Butter fails to explicitly disclose a load distribution logic module connected to the data generator and to the data

transmission buffer, wherein the load distribution logic module is configured to control the data rate of the data generator based on occupancy of data in said data transmission buffer. But Butter discloses taking the processing load into account (Butter: column 9, lines 35-40) in determining scalability of the coded signal as a part of the scene change detection logic (Butter: column 9, lines 41-47). Accordingly, given this teaching, it would have been obvious to modify the scene change detection logic to further include load distribution logic connected to the data generator and the data transmission buffer in order to determine the scalability of the coded signal (Butter: column 9, lines 25-45). The Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has all of the features of claim 1.

Regarding claims 2-3, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein said data transmission buffer has an occupancy level when the data rate is greater than the available bandwidth over the communications link (Butter: column 14, lines 5-30), as in the claims.

Butter discloses an apparatus for adaptive bandwidth allocation in an audio/visual distribution system having a digital data generator connected to a transmitter (Butter: figure 6), said transmitter configured to transmit said digital data over a communications link to a receiver (Butter: column 1, lines 35-45), said apparatus comprising: a data transmission buffer configured for connection between the digital data generator and the transmitter (Butter: column 15, lines 15-20), as in claim 4. However, Butter fails to explicitly disclose a load distribution logic module connected to the data generator and to the data transmission buffer, wherein the load distribution logic module is configured to control the data rate of the data generator based on occupancy of data in said data transmission buffer. But Butter discloses taking the processing load into account

(Butter: column 9, lines 35-40) in determining scalability of the coded signal as a part of the scene change detection logic (Butter: column 9, lines 41-47). Accordingly, given this teaching, it would have been obvious to modify the scene change detection logic to further include load distribution logic connected to the data generator and the data transmission buffer in order to determine the scalability of the coded signal (Butter: column 9, lines 25-45). The Butter apparatus, now modified to have the disclosed scene change detection logic further include load distribution logic has all of the features of claim 4.

Regarding claims 5-6, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein said data transmission buffer has an occupancy level when the data rate is greater than the available bandwidth over the communications link (Butter: column 14, lines 5-30), as in the claims.

Butter discloses a method for adaptive bandwidth allocation in an audio/visual distribution system having a digital data generator connected to a transmitter (Butter: figure 6), said transmitter configured to transmit said digital data over a communications link to a receiver (Butter: column 1, lines 35-45), said method comprising: providing a data transmission buffer configured for connection between the digital data generator and the transmitter (Butter: column 15, lines 15-20), as in claim 7. However, Butter fails to explicitly disclose providing a load distribution logic module connected to the data generator and to the data transmission buffer, wherein the load distribution logic module is configured to control the data rate of the data generator based on occupancy of data in said data transmission buffer. But Butter discloses taking the processing load into account (Butter: column 9, lines 35-40) in determining scalability of the coded signal as a part of the scene change detection logic (Butter: column 9, lines 41-47).

Accordingly, given this teaching, it would have been obvious to modify the scene change detection logic to further include load distribution logic connected to the data generator and the data transmission buffer in order to determine the scalability of the coded signal (Butter: column 9, lines 25-45). The Butter method, now modified to have the disclosed scene change detection logic further include load distribution logic has all of the features of claim 7.

Regarding claims 8-9, the Butter distribution method, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein said data transmission buffer has an occupancy level when the data rate is greater than the available bandwidth over the communications link (Butter: column 14, lines 5-30), as in the claims.

Butter discloses an audio/visual signal distribution system with adaptive bandwidth allocation (Butter: figure 6), comprising: a data generation device (Butter: column 5, lines 110-35); a transmitter (Butter: figure 6), said transmitter configured to transmit said digital data over a communications link to a receiver (Butter: column 1, lines 35-45); a transmission buffer connected between the data generation device and the transmitter (Butter: column 15, lines 15-20), as in claim 1. However, Butter fails to explicitly disclose a load distribution logic module connected to the data generator and to the data transmission buffer, wherein the load distribution logic module is configured to control the data rate of the data generator based on occupancy of data in said data transmission buffer. But Butter discloses taking the processing load into account (Butter: column 9, lines 35-40) in determining scalability of the coded signal as a part of the scene change detection logic (Butter: column 9, lines 41-47). Accordingly, given this teaching, it would have been obvious to modify the scene change detection logic to further include load distribution logic connected to the data generator and the data transmission buffer in order to

determine the scalability of the coded signal (Butter: column 9, lines 25-45). The Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has all of the features of claim 10.

Regarding claims 11-12, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein said data transmission buffer has an occupancy level when the data rate is greater than the available bandwidth over the communications link (Butter: column 14, lines 5-30), as in the claims.

Regarding claim 13, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has a prefiltering and spatial/temporal subsampler (Butter: column 7, lines 1-13; column 9, lines 1-25); and a frequency domain quantizer connected to the prefiltering and spatial/temporal subsampler (Butter: column 5, lines 10-35); wherein the load distribution logic module further includes logic for controlling a coarseness of subsampling by the prefiltering and spatial/temporal subsampler (Butter: column 9, lines 30-50), as in the claim.

Regarding claim 14, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has a motion compensation orthogonal transform module connected between the prefiltering and spatial/temporal subsampler and the frequency domain quantizer (Butter: column 5, lines 15-35), as in the claim.

Regarding claims 15 and 18, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has an encoder connected between the frequency domain quantizer and the transmission buffer, the encoder

encoding quantized coefficients from the frequency domain quantizer (Butter: column 5, lines 15-35), as in the claims.

Regarding claim 16, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein the quantized coefficients are run-time encoded (Butter: column 8, lines 35-45), as in the claim.

Regarding claim 17, the Butter distribution system, now modified to have the disclosed scene change detection logic further include load distribution logic has wherein the quantized coefficients are entropy encoded (Butter: column 8, lines 35-45), as in the claim.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fuller discloses a video distribution system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

ANDY RAO
PRIMARY EXAMINER

asr
May 25, 2006